

**Amendments to the Claims:**

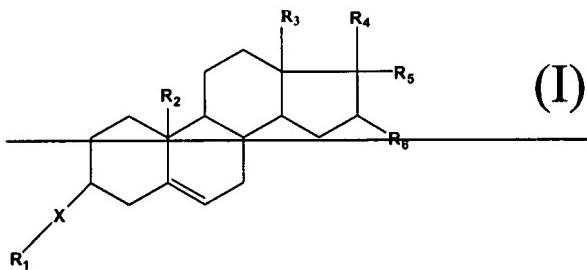
This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1-46. (Canceled)

47. (Currently amended) A method of decreasing melanin production in a melanocyte, comprising contacting the melanocyte with an effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking in the melanocyte, the alteration resulting in a decrease in melanin production in the melanocyte, the method comprising contacting the melanocyte with a compound selected from the group consisting of

- (a) progesterone,
- (b) a hydrophobic amine selected from the group consisting of phenothiazine, and a tricyclic antidepressant,
- (c) sphingosine, and
- (d) a compound of the formula selected from the group consisting of:



wherein X is O or S;

~~R<sub>1</sub> is C(O)(C<sub>1</sub>-C<sub>6</sub>)alkyl or (CH<sub>2</sub>)<sub>n</sub>-O-(C<sub>1</sub>-C<sub>6</sub>)alkyl, or (CH<sub>2</sub>)<sub>n</sub>-NR<sub>7</sub>R<sub>8</sub> where n is 0-3, and where each of R<sub>7</sub> and R<sub>8</sub> are independently selected from H and (C<sub>1</sub>-C<sub>6</sub>)alkyl;~~

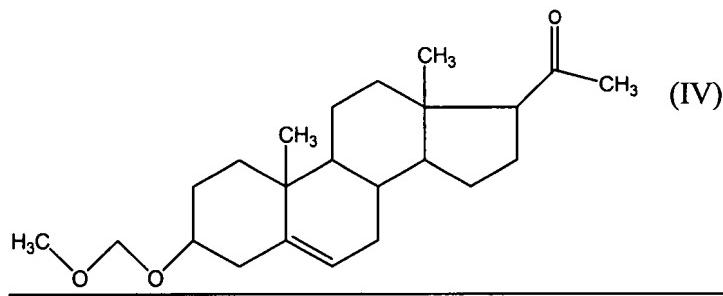
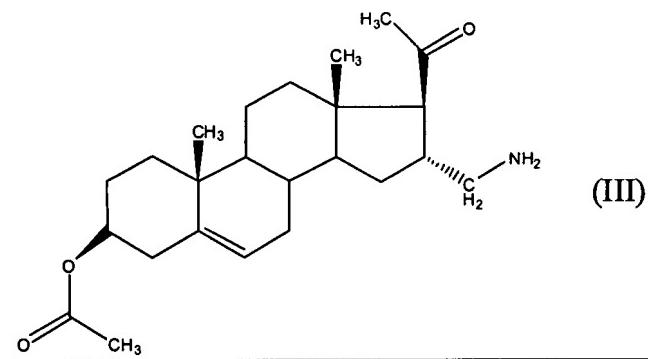
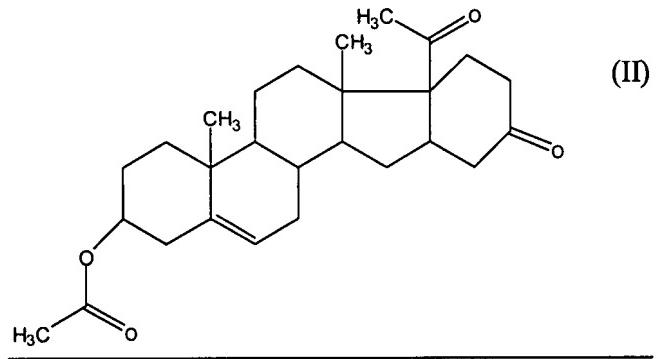
~~R<sub>2</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;~~

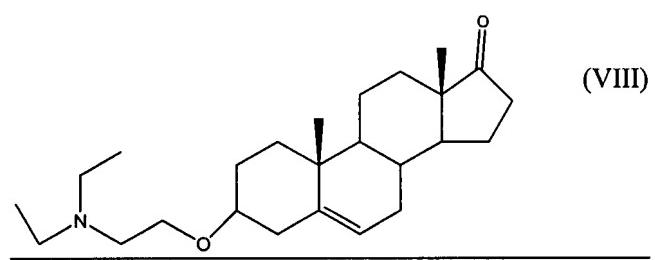
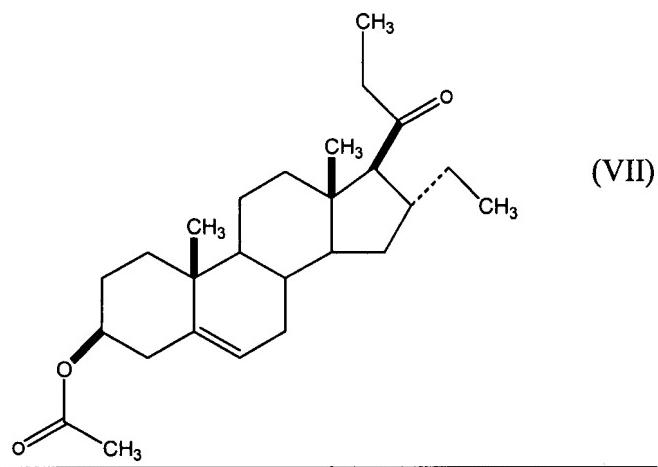
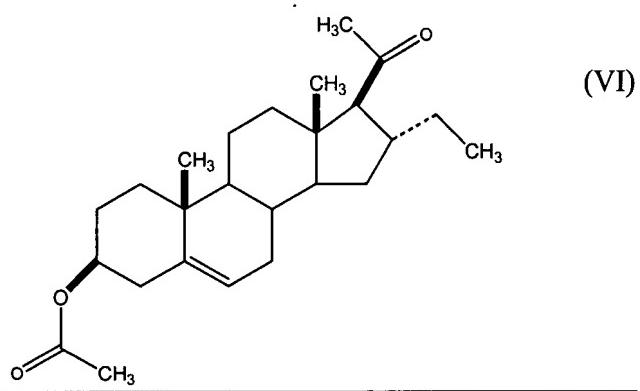
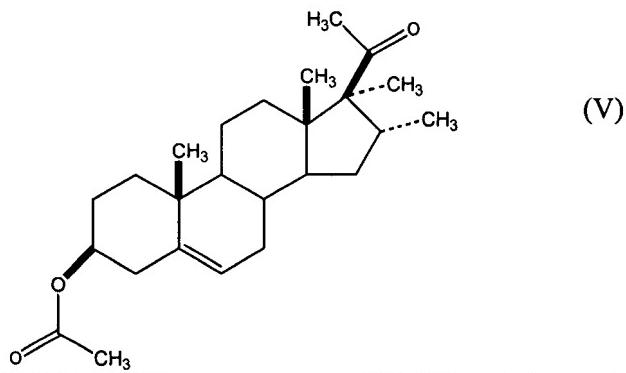
~~R<sub>3</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;~~

~~R<sub>4</sub> is C(O)(C<sub>1</sub>-C<sub>6</sub>)alkyl;~~

~~R<sub>5</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl; or R<sub>4</sub> and R<sub>5</sub> together are =O; and~~

~~R<sub>6</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl or (CH<sub>2</sub>)<sub>n</sub>-NR<sub>9</sub>R<sub>10</sub> where each of R<sub>9</sub> and R<sub>10</sub> are independently selected from H and (C<sub>1</sub>-C<sub>6</sub>)alkyl; or R<sub>5</sub> and R<sub>6</sub> taken together with the carbon atoms to which they are attached form a C<sub>5</sub>-C<sub>8</sub> carbocyclic ring, the ring being optionally substituted by one to three substituents selected from halogen, OH, (C<sub>1</sub>-C<sub>6</sub>)alkyl, C<sub>1</sub>-C<sub>6</sub> alkoxy, amino, =O, (C<sub>1</sub>-C<sub>6</sub>)alkylamino, di-(C<sub>1</sub>-C<sub>6</sub>)alkylamino, trifluoromethyl, and OCF<sub>3</sub>.~~





and a pharmaceutically acceptable salt or solvate thereof.

48. (Original) The method of claim 47, wherein the compound is progesterone.

49. (Previously presented) The method of claim 47, wherein the compound is a hydrophobic amine selected from the group consisting of a phenothiazine and a tricyclic antidepressant.

50. (Canceled)

51. (Previously presented) The method of claim 49, wherein the compound is a phenothiazine.

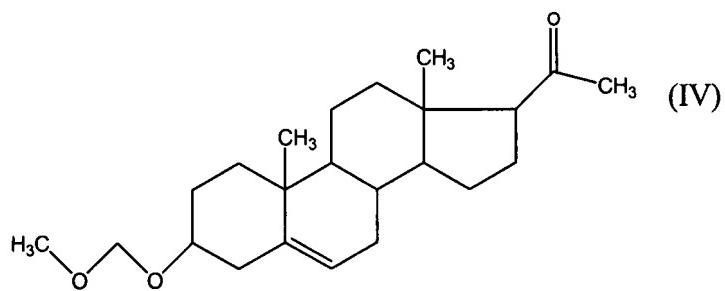
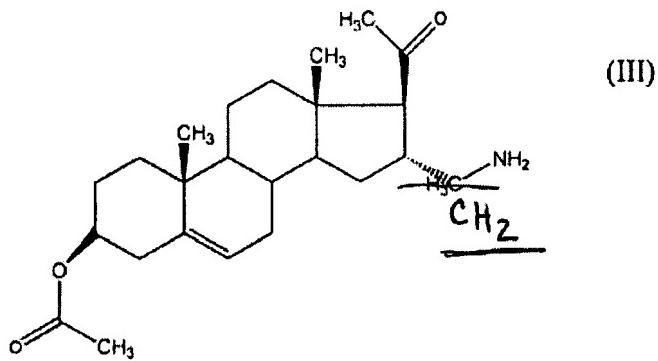
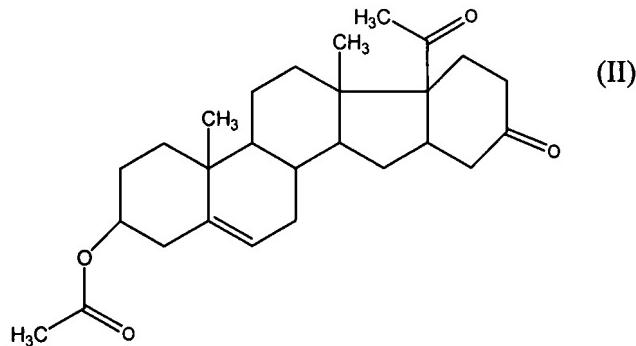
52. (Original) The method of claim 51, wherein the phenothiazine is selected from the group consisting of trifluoperazine, chlorpromazine, prochlorperazine, triflupromazine, promazine, thioridazine, mesoridazine, piperacetazine, perphenazine, fluphenazine, acetophenazine, and thiethylperazine.

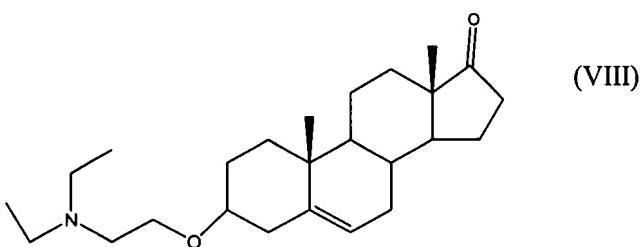
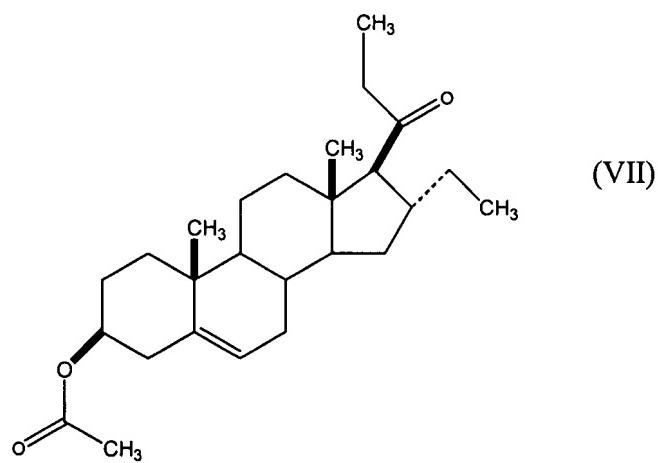
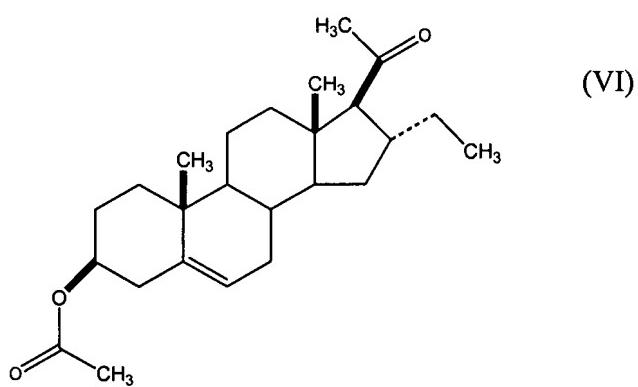
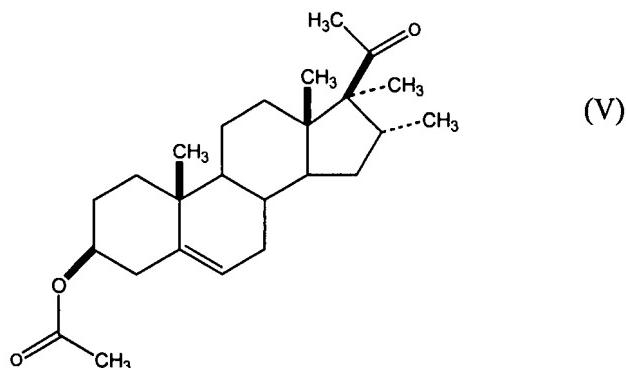
53. (Previously presented) The method of claim 49, wherein the compound is a tricyclic antidepressant.

54. (Original) The method of claim 53, wherein the tricyclic antidepressant is selected from the group consisting of imipramine, nortriptyline, protriptyline, trimipramine, and doxepin.

55. (Original) The method of claim 47, wherein the compound is sphingosine.

56. (Currently amended) The method of claim 47, wherein the compound is selected from the group consisting of:



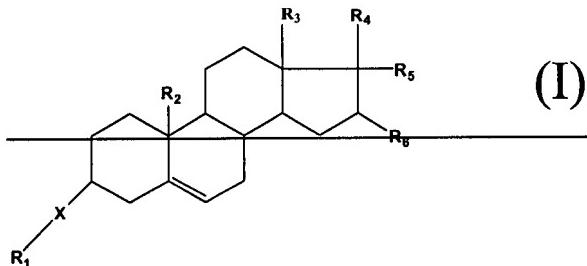


and a pharmaceutically acceptable salt or solvate thereof.

57-59. (Cancelled)

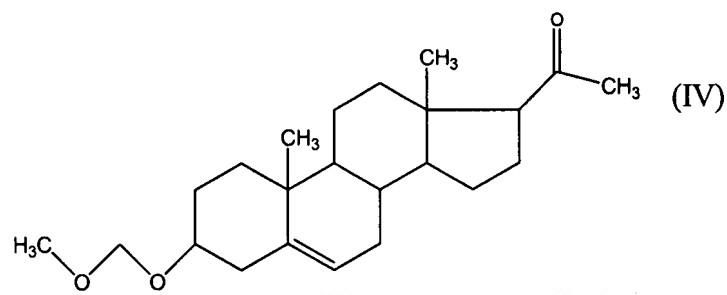
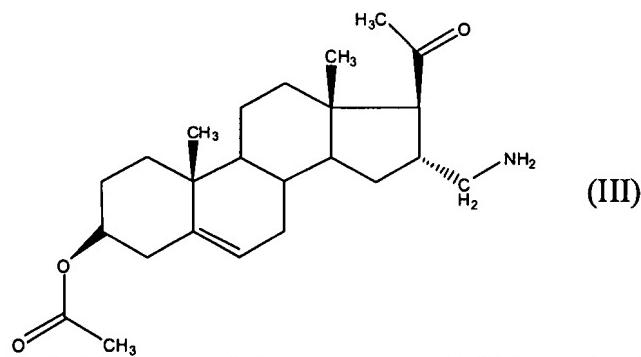
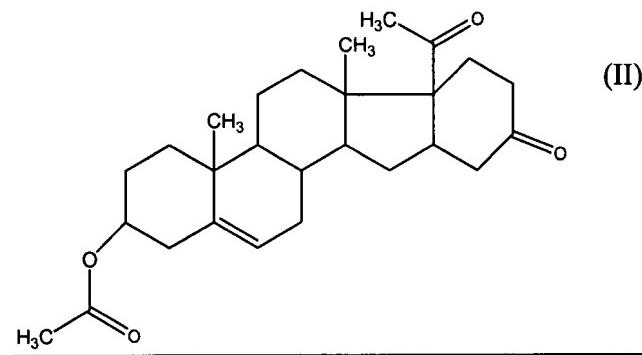
60. (Previously presented) A method of reducing skin pigmentation, comprising contacting skin with a pharmaceutically effective amount of a compound that effects an alteration in late endosomal/lysosomal trafficking, the alteration in late endosomal/lysosomal trafficking results in a reduction of skin pigmentation, the method comprising contacting the skin with a pharmaceutically effective amount of a compound selected from the group consisting of

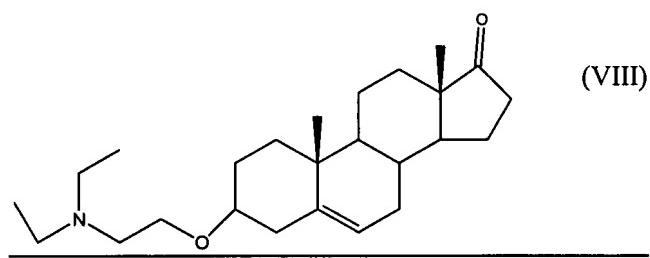
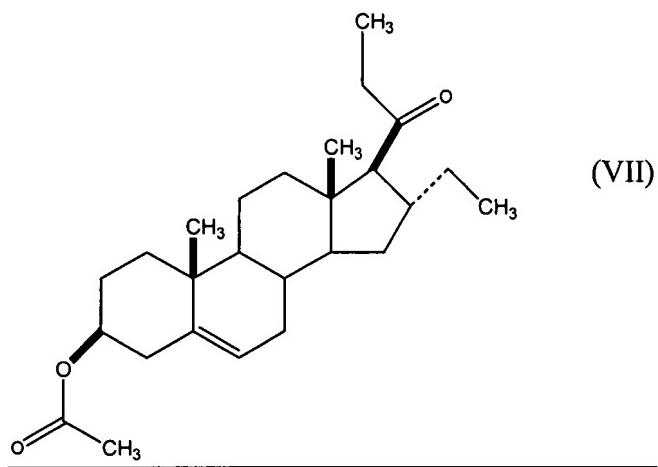
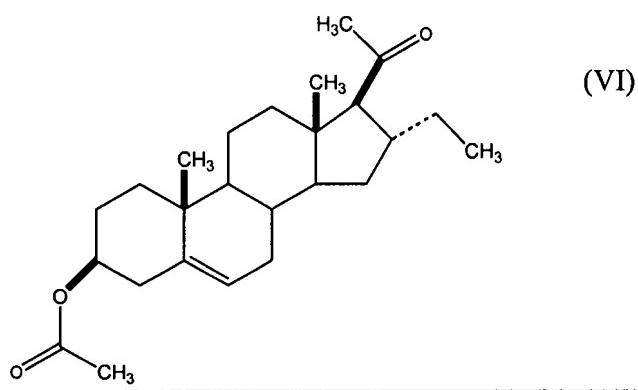
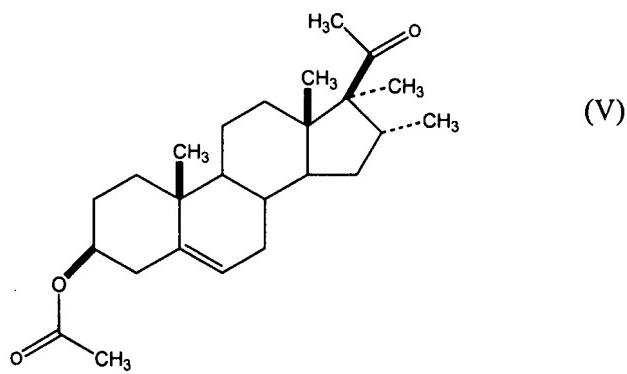
- (a) progesterone,
- (b) a hydrophobic amine selected from the group consisting of phenothiazine, and a tricyclic antidepressant,
- (c) sphingosine, and
- (d) a compound of the formula selected from the group consisting of:



wherein X is O or S;  
~~R<sub>4</sub> is C(O)(C<sub>1</sub>-C<sub>6</sub>)alkyl or (CH<sub>2</sub>)<sub>n</sub>-O-(C<sub>1</sub>-C<sub>6</sub>)alkyl, or (CH<sub>2</sub>)<sub>n</sub>-NR<sub>7</sub>R<sub>8</sub> where n is 0-3, and where each of R<sub>7</sub> and R<sub>8</sub> are independently selected from H and (C<sub>1</sub>-C<sub>6</sub>)alkyl;~~  
~~R<sub>2</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;~~  
~~R<sub>3</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl;~~  
~~R<sub>4</sub> is C(O)(C<sub>1</sub>-C<sub>6</sub>)alkyl;~~  
~~R<sub>5</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl; or R<sub>4</sub> and R<sub>5</sub> together are =O; and~~  
~~R<sub>6</sub> is H or (C<sub>1</sub>-C<sub>6</sub>)alkyl or (CH<sub>2</sub>)<sub>n</sub>-NR<sub>9</sub>R<sub>10</sub> where each of R<sub>9</sub> and R<sub>10</sub> are independently selected from H and (C<sub>1</sub>-C<sub>6</sub>)alkyl; or R<sub>5</sub> and R<sub>6</sub> taken together with the carbon atoms to which they are attached form a C<sub>5</sub>-C<sub>8</sub> carboyclic ring, the~~

~~ring being optionally substituted by one to three substituents selected from halogen, H, —(C<sub>1</sub>—C<sub>6</sub>)alkyl, —C<sub>1</sub>—C<sub>6</sub>alkoxy, amino, —O, —(C<sub>1</sub>—C<sub>6</sub>)alkylamino, di(C<sub>1</sub>—C<sub>6</sub>)alkylamino, trifluoromethyl, and OCF<sub>3</sub>.~~





and a pharmaceutically acceptable salt or solvate thereof.

61. (Original) The method of claim 60, wherein the compound is progesterone.

62. (Previously presented) The method of claim 60, wherein the compound is a hydrophobic amine selected from the group consisting of phenothiazine and a tricyclic antidepressant.

63. (Canceled)

64. (Previously presented) The method of claim 62, wherein the compound is a phenothiazine.

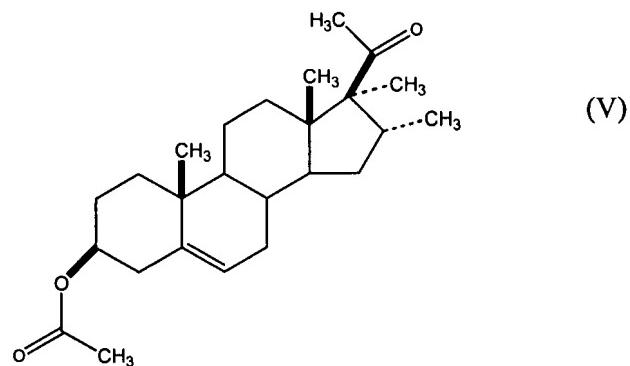
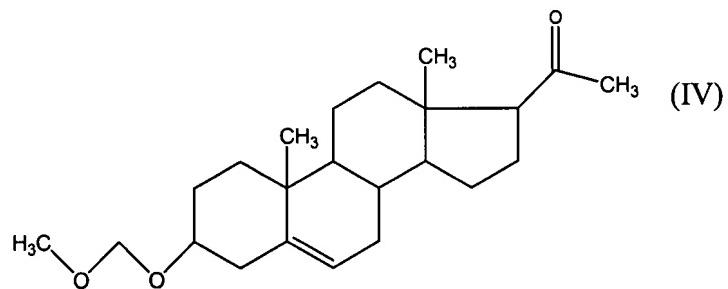
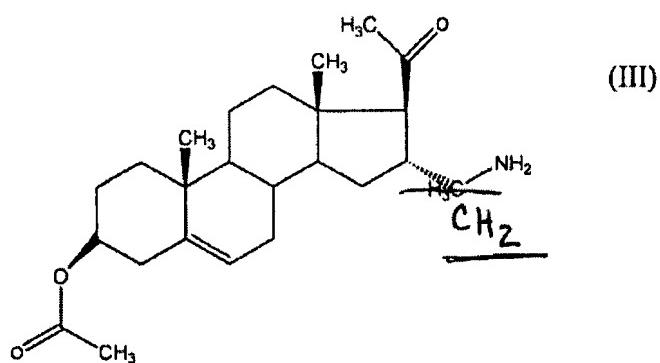
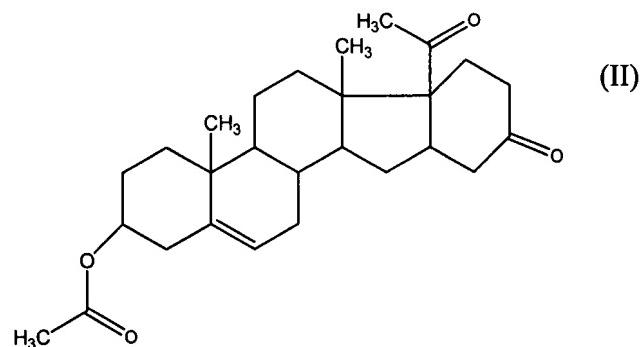
65. (Original) The method of claim 64, wherein the phenothiazine is selected from the group consisting of trifluoperazine, chlorpromazine, prochlorperazine, triflupromazine, promazine, thioridazine, mesoridazine, piperacetazine, perphenazine, fluphenazine, acetophenazine, and thiethylperazine.

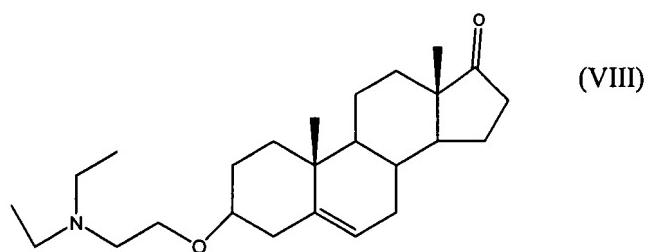
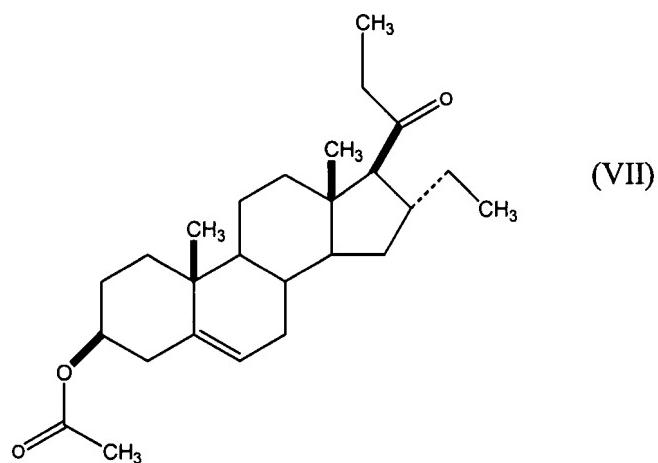
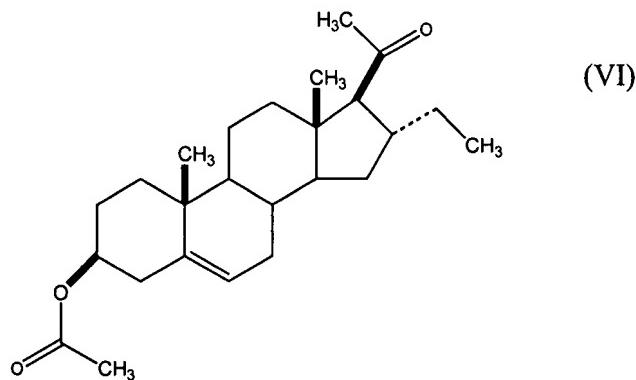
66. (Previously presented) The method of claim 62, wherein the compound is a tricyclic antidepressant.

67. (Original) The method of claim 66, wherein the tricyclic antidepressant is selected from the group consisting of imipramine, nortriptyline, protriptyline, trimipramine, and doxepin.

68. (Original) The method of claim 60, wherein the compound is sphingosine.

69. (Currently amended) The method of claim 60, wherein the compound is selected from the group consisting of:





and a pharmaceutically acceptable salt or solvate thereof.

70-77. (Canceled)